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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,994

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EXAMINER

GOMA, TAWFIK A

ART UNIT

PAPER NUMBER

2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/687,994	Applicant(s) LEE ET AL.	
	Examiner Tawfik Goma	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-16,18-35 and 37-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-30 and 34 is/are allowed.
- 6) ☒ Claim(s) 1, 3-9, 11-16, 18-22, 31-33, 35, and 37-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the amendment filed on 11/27/2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-9, 11-16, 18-22, 31-33 35, and 37-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Seo (US 2002/0101808)

Regarding claims 1, Seo discloses an optical pickup system which outputs and controls optical power used for driving a laser diode (fig. 10), comprising: a monitor photo diode which selects a first gain selected from a first plurality of gains and which corresponds to a type of a disk to be driven according to an input signal (368, fig. 10 and par. 68), selects a second gain selected from a second plurality of gains and which corresponds to an optical power used for driving the laser diode (par. 79 and par. 81), and adjusts a detected optical power using the selected first and second gains to produce a monitoring signal for use in driving the laser diode (304, 306, fig. 10 and pars 68-69). Seo further discloses wherein the monitor photo diode comprises a first gain for when a command is issued to output a preheating overpower to the laser diode and a second gain other than the first gain for when a command is issued to output a write or a read power to the laser diode (Table 1 and par. 51).

Regarding claim 8, Seo discloses an apparatus for controlling a monitor photo diode (fig. 10), which monitors an optical signal output from a laser diode for writing data on or reading

data from a disk (fig. 10), the apparatus comprising: a comparator which compares a voltage signal corresponding to a detected optical power output from the laser diode with a predetermined reference voltage signal (306, fig. 10); and a gain selector which selectively issues a gain controlled signal for use in controlling the optical power output from the laser diode, the outputted gain being a gain selected from a plurality of gains which corresponds with a type of the optical signal output from the laser diode (368, fig. 10 and par. 69). Seo further discloses wherein the monitor photo diode comprises a first gain for when a command is issued to output a preheating overpower to the laser diode and a second gain other than the first gain for when a command is issued to output a write or a read power to the laser diode (Table 1 and par. 51).

Regarding claims 3, 11 and 18, Seo discloses wherein the second gain is set so that a predetermined cut-off voltage is output when the detected optical power is substantially the overpower when the first command is issued to output the overpower to the laser diode (par. 70).

Regarding claims 4, 12 and 19, Seo discloses wherein the second gain is set so that a predetermined cut-off voltage is output when the detected optical power is substantially the read or write power when the second command is issued to output the read or write power to the laser diode (par. 70).

Regarding claims 5, 13, and 20 wherein the monitor photo diode selects a greater gain when a command is issued to output a write or a read power to the laser diode than a gain when a command is issued to output a preheating overpower to the laser diode (Pwl and fig. 6a). Seo

discloses that the preheating overpower gain (greater than the bias level power) can be set to a value of P_{wl} , which is lower than the value used for the write power P_w .

Regarding claim 6, Seo discloses wherein one of the first and second gains is selected according to a type of a power enable signal transmitted from an optical pickup controller for driving the laser diode (Table 1 and pars. 68-69).

Regarding claims 7, Seo discloses wherein the first gain is selected when the power enable signal is an overpower enable signal (Table 1 and par. 69).

Regarding claim 9, Seo further discloses an optical pickup controller and an output unit which adjusts a level of gain controlled signal output from the comparator to be compatible with a level of a signal input to the optical pickup controller and outputs the level-adjusted signal for use by the optical pickup controller.

Regarding claim 10, Seo further discloses an optical pickup controller that outputs a power enable signal for driving the laser diode (Table 1), wherein if the optical pickup controller outputs the power enable signal to be input to the laser diode, the gain selector issues the first gain (P_{wh} , P_{wl}), and if the power enable signal is not input to the laser diode, the gain selector issues the second gain (P_w , and par. 65).

Regarding claim 15, Seo further discloses wherein the power enable signal is an overpower enable signal input into the laser diode from the optical pickup controller (Table 1).

Regarding claims 16, Seo discloses an optical pickup system which outputs and controls optical power used for driving a laser diode (fig. 10), comprising: a monitor photo diode which selects a first gain selected from a first plurality of gains and which corresponds to a type of a disk to be driven according to an input signal (368, fig. 10 and par. 68), selects a second gain

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selected from a second plurality of gains and which corresponds to an optical power used for driving the laser diode (par. 79 and par. 81), and adjusts a detected optical power using the selected first and second gains to produce a monitoring signal for use in driving the laser diode (304, 306, fig. 10 and pars 68-69). Seo further discloses wherein the first gain varies depending on whether the disk is a CD or a DVD (par. 68), and the second gain varies depending on whether a first command is issued to output a preheating overpower to the laser diode or a second command is issued to output a write or a read over to the laser diode is issued (par. 69 and Table 1).

Regarding claim 21, Seo further discloses an optical pickup controller that transmits a power enable signal for driving the laser diode, wherein the second gain is selected using the power enable signal when transmitted from the optical pickup controller for driving the laser diode (Table 1, and pars. 51 and 69).

Regarding claim 22, Seo further discloses controlling a controller than transmits an overpower enable signal (368, fig. 10), wherein the second gain is selected using the overpower enable signal transmitted from the controller (Table 1, and pars. 51 and 69).

Regarding claims 31, 32, 33, and 44, Seo further discloses a controller which controls the optical pickup system to transfer data with respect to the disk and which drives the laser diode according to the monitoring signal (pars. 61 and 62).

Regarding claims 35, Seo discloses an apparatus for controlling a monitor photo diode (fig. 10), the apparatus comprising: a detection unit that determines a type of optical signal to be output from a laser diode (par. 69 and Front Monitor), and adjusts a detected optical power

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signal output from the laser diode according to the determined type of the optical signal (par. 51 and Table 1); and a signal output unit which uses the adjusted optical power signal to generate a monitoring signal for use in maintaining a power level of the optical signal (par. 70 and fig. 10). wherein the detection unit receives an input signal corresponding to the type of optical signal to be output (368, fig. 10, AP type, fig. 6a and Table 1), selects an adjustment factor from a plurality of adjustment factors corresponding to the input signal (par. 51 and par. 69), and adjusts the detected optical power signal according to the selected adjustment factor (par. 69).

Regarding claim 37, Seo discloses wherein the input signal indicates a type of disk on which light emitted by the laser diode is being received (par. 68), and the plurality of adjustment factors includes a first adjustment factor corresponding to a first type of disk and a second adjustment factor corresponding to a second type of disk other than the first type (CD, DVD, par. 68).

Regarding claim 38, Seo discloses wherein the input signal indicates a type of optical operation being performed by light emitted by the laser diode with respect to a disk (par. 51 and Table 1), and the plurality of adjustment factors includes a first adjustment factor corresponding to an optical operation having a first maximum laser diode power level and a second adjustment factor corresponding to an optical operation having a second maximum laser diode power level other than the first maximum laser diode power level (P_w , P_{wh} , par. 65 and fig. 6b).

Regarding claim 39, Seo further discloses wherein the first maximum laser diode power level corresponds to a preheating overpower operation (fig. 6b, write power), and the second

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maximum laser diode power level corresponds to a read or a write operation (first and last pulses, fig. 6b).

Regarding claim 40, Seo further discloses wherein the determined type of the optical signal has a maximum power (Table 1 and par. 70), and the detection unit adjusts the detected optical power as compared to the maximum power (par. 70).

Regarding claim 41, Seo further discloses wherein the monitoring signal has an inverse relationship with the maximum power such that, if the detected optical power is equal to or greater than the maximum power, a minimum signal is output (par. 70). The comparator can output a 0 if the monitoring signal matches the reference value.

Regarding claim 42, Seo discloses wherein the maximum power changes according to the type of optical signal such that, for a first type of optical signal, the maximum power is a first level, and for a second type of optical signal, the maximum power is a second level other than the first level (par. 68).

Regarding claim 43, Seo discloses wherein: the detection unit adjusts the detected optical power using a first relationship for a first type of optical signal, and adjusts the detected optical power using a second relationship for a second type of optical signal, and the first relationship is other than the second relationship (par. 68).

Response to Arguments

Applicant's arguments filed 11/27/2006 have been fully considered but they are not persuasive. Seo discloses everything claimed as evidenced in the office action. Applicant's argument that Seo teaches a relationship between a power level and the mark and space between the marks does not show why Seo fails to disclose what applicant has claimed.

Allowable Subject Matter

Claims 23-30 and 34 are allowed for the same reasons indicated in the previous office action.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

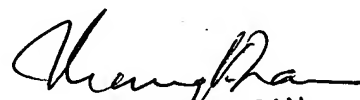
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tawfik Goma whose telephone number is (571) 272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


T. Goma
2/7/2007


THANH V. TRAN
PRIMARY EXAMINER